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U. S. DEPARTMENT OF AGRICULTURE,
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HOW TEACHERS IN RURAL ELEMENTARY SCHOOLS MAY USE
FARMERS' BULLETIN 934, HOME GARDENING IN THE SOUTH.

Range of use.—Rural sections of the Southern States.¹

Relation to the course of study.—This bulletin will be useful in classes in agriculture and in economic nature study. It will be especially helpful in emergency courses in food production. Correlations with other school subjects are abundant.

Topics for study.—I. Importance: Preparation for gardening. Location and arrangement, pages 3-8; succession and rotation crops, pages 8-9; seeds for the garden, page 15. II. Aids to earliness: The seed box, pages 9-10; the hotbed, pages 10-11; the cold frame, transplanting, hardening off, pages 11-13; setting in the open, pages 13-14. III. Early steps in the garden: Tools, page 14; preparation of the soil, improving the texture, manures and fertilizers, pages 15-17; planting in the open, time for planting, pages 18-20; depth and distances for planting, pages 21-22. IV. Later steps: Cultivation, irrigation, and insect and disease control, pages 22-24. V. Cultural suggestions for specific crops, pages 24-45.

Class exercises.—(Develop fully such phases of this outline as may be applied by pupils at their homes, preferably as their own projects.)

I. In what ways is the home garden important on the farm; for profit, for health and for pleasure? Do the families in this district have gardens sufficient for the needs of the family in summer? For canning and for winter storage? For a fall and winter garden? Examine the data obtained in the survey (see correlations) and find what vegetables are raised in adequate quantity. Which of the vegetables listed on page 15 are not grown. Have each pupil obtain from the parents information as to the size and location of the proposed garden for the coming season, with a diagram showing the surrounding buildings, fences, and hedges. Consider all the following topics in terms of these particular gardens, and not in a general sense. Where the pupil may select his own garden spot, consider location, light, drainage, etc., with care. How and where shall the perennials such as asparagus and rhubarb be arranged? Why? Find the best location for the hotbed or cold frame. Study the list of vegetables, pages 24 to 45, and then choose the ones to be raised in the home garden. Encourage the increase in number of varieties to be grown. Use the charts on pages 5 and 6 as suggestions and plan the home garden with care. What

¹ For larger towns and cities use Farmers' Bulletin 936, "The City and Suburban Vegetable Garden," and for Northern States use Farmers' Bulletin 937.

quantity of seed will this require for each variety? Plan also for succession crops and rotation crops. Use the seed catalogues and the advice of expert gardeners, so as to procure the right quantity of good seeds at an early date.

II. What plants shall we start in a seed box? Why? What are the most convenient sizes and shapes for seed boxes? How sow the seeds? Are hotbeds or cold frames needed in this district? Will any pupil construct one at home in connection with his project garden? If so, take up with care the construction of this and then the management. Get also State college extension circulars on this topic for specific application to this district. How "harden off" the plants? How transplant? How and when set in the open?

III. What tools are available at the homes for the purpose of preparing the soil and for cultivating the garden crops? What other tools are needed for efficient work? What useful implements may be made by the pupils? Check up on the seeds ordered to be sure the supply is on hand. What are the steps in preparing the soil? Discuss with each pupil the character of soil in his garden, its recent use and latest steps in preparation. How may the texture of the soil in each garden be improved? How much manure is available and what similar material has been worked into the soil recently? Discuss the question of commercial fertilizers as it concerns each case. Study the tables and maps for planting in the open and inquire as to any exceptional local factors such as elevation, etc., which may modify the general information. Seeds which may need disinfecting before sowing should be treated now. (See Farmers' Bulletin 856.) Also test seeds as explained in Farmers' Bulletin 428.

When this work is handled as a fall and winter garden investigate the need of protection from early frosts. Take up with the class the methods of planting the crops which all are to raise and with each pupil the other crops in which he may be especially interested. How deep shall the different seeds be sown? What space is to be allowed for each? Follow the garden plan as it was first drawn. Look over the early cultural directions (pp. 24-45) for each variety to be grown.

IV. As school may close before summer practice begins, take up with care the steps in cultivation, in control of pests (Farmers' Bulletin 856), and irrigation. Also go into details on succession crops to follow the early vegetables, the methods of utilizing or marketing the vegetables at the right stage. Which vegetables may remain in the summer garden until used and which must be preserved or stored in some way as soon as they reach the best stage. In the case of the fall gardens, find the best methods for storing the different vegetables. Encourage the increase of cold weather plants to be grown in the fall garden. For special adaptation to local conditions, consult the county

agent or write to the State college of agriculture. Obtain all the bulletins on gardening issued in the State, also United States Department of Agriculture and State publications on canning, drying, and storing.

Illustrative material.—Catalogues of seed firms. Pictures of good methods of gardening, ideal plantings, etc., from farm papers. Plans for seed boxes, cold frames, or hotbeds. Plans or charts of gardens issued by reliable authorities. Specimens of seeds, fertilizer material, etc. (See Farmers' Bulletins 586 and 606.) Smaller garden tools, seed flats, spraying equipment and materials. Specimens of insect pests and evidences of damage done. Pictures of diseased specimens. Spraying charts and calendars. Specimens of unusual vegetables which may be desirable in this section. Charts showing food values and uses of vegetables. A cold frame or hotbed on the school grounds if it may be used to good advantage.

Practical exercises.—Each pupil should carry on a home garden project to furnish a home supply of vegetables, to can, dry, or store the surplus, or to market a supply if this is feasible. The inspection of home gardens, with the cooperation of club leaders or others, is desirable, but at least the pupils' plans and problems should all be worked out at school. A few seed flats at school, still better, a cold frame or hotbed may provide practice at school and furnish early plants to be used by all the pupils on their home projects. Where a school garden is conducted, carry out all the instruction given, but the home project is generally of more value. Test seeds at school. Demonstrate spray mixing and spraying methods. Take field trips to observe the work of any successful market gardener or any home project which can teach a definite lesson. Be sure to hold a school exhibit of vegetables at the time when it will best fit the local gardens.

In very many communities in the South club work in gardening and canning is carried on in cooperation with the State college of agriculture and the Department of Agriculture. The relation of club work to school work in gardening should be carefully considered and the cooperation of the club leader should be obtained wherever possible.

Correlations.—Have pupils gather information as to the garden practice in the neighborhood; area of each garden; varieties grown and quantities of each; utilization of vegetables, especially the surplus; labor on garden, amount and by whom; cost of seed, fertilizer and other costs so far as available; estimated value of food furnished home; garden produce sold; vegetable surplus wasted; amount canned or dried and estimated value; amount of canned food bought which might have been furnished by home grown garden; pests which destroyed crops and estimated loss. And other data which may seem desirable and tabulate such results as lend themselves to computation or comparison. Chart forms are suggested, to be modified as needed.

General garden survey.

Family.	Garden area.	Cost.		Income.		Income per person.	Care by.	No. of varieties.
		Ma-terial.	Labor.	Home use.	Sold.			
Mr. A.....
Mr. B.....
Etc.
Total.....

Form to show range of garden.

[Check with quantity or area.]

Family.	Beans, snap.	Beans, bush lima.	Beans, pole lima.	Beets, early.	Beets, late.	Cab-bage, early.	Cab-bage, late.	Carrot.	Etc.
Mr. A.....
Mr. B.....
Etc.
Total.....
Number of families using..

Have pupils keep accurate accounts of their projects, including costs, time, material, income, vegetables used, vegetables preserved and amount sold. In arithmetic classes have the accounts put into form and balanced. In language lessons have reports on projects written and revised. Have pupils use, spell, and pronounce correctly all names.

Geography: Locate on the map the markets for all vegetables sold from this district, also the sources of either fresh or canned vegetables from outside which are sold in the district at any time of the year. Find the probable origin of as many as possible of vegetables and locate these homes on the map of the world. Where is each now grown on a large scale?

Nature study: The relationships of groups of vegetables such as cabbage, turnip, cauliflower, etc., are of interest and of some practical value. Also note that some weeds are related to useful vegetables.

Manual training: Have pupils make seed flats, markers, and other needed equipment, also repair any tools so far as they may be able. If hotbeds or cold frames are to be made either at home or at school have the pupils draw plans and construct these under proper supervision. Stakes and trellises will be needed for summer use and pupils who may plan to market vegetables will need boxes and crates.

F. E. HEALD,

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